

Translation

PATENT COOPERATION TREATY

PCT/JP2003/013823



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FTE0307-PCT	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/JP2003/013823	International filing date (day/month/year) 29 October 2003 (29.10.2003)	Priority date (day/month/year) 29 October 2002 (29.10.2002)
International Patent Classification (IPC) or national classification and IPC H01J 29/28, 9/22, 31/12		
Applicant KABUSHIKI KAISHA TOSHIBA		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- ☒ Box No. I Basis of the report
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 22 April 2004 (22.04.2004)	Date of completion of this report 28 September 2004 (28.09.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/013823

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ The international application as originally filed/furnished
- ☐ the description:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- pages _____, as originally filed/furnished
- pages* _____, as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the drawings:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Claims

4-5, 11-12, 20-21, 25-26, 28

YES

Claims

1-3, 6-10, 13-19, 22-24, 27, 29-30

NO

Inventive step (IS)

Claims

4-5, 11-12, 20-21, 25

YES

Claims

1-3, 6-10, 13-19, 22-24, 26-30

NO

Industrial applicability (IA)

Claims

1-30

YES

Claims

NO

2. Citations and explanations (Rule 70.7)

Document 1: WO, 02/37522, A1 (Toshiba Corporation)
May 10, 2002 (05.10.02)

Document 2: JP, 2000-319588, A (Sony Corporation)
November 21, 2000 (11.21.00)

Document 3: JP, 54-105959, A (Hitachi, Ltd.)
August 20, 1979 (08.20.79)

(All of the above documents were cited in the ISR.)

- Claims 1-3, 6-10, 13-19, 22-24, 27 and 29-30

The inventions described in each of the above claims do not appear to involve an inventive step or possess novelty based on document 1.

Document 1 (page 8, line 21 to page 10, line 4) describes an undercoat of a metal back made of SiO_2 and TiO_2 (corresponding to a first treatment layer) and an overcoat (corresponding to a second treatment layer), and these do not particularly differ from the inventions described in each of the above claims.

- Claims 26 and 28

The inventions described in each of the above claims do not appear to involve an inventive step based on documents 1-2.

Document 2 describes a step for polymerizing a compound indicated by $\text{Si}(\text{OR}_1)_n\text{R}_2_m$ (corresponding to alkoxide of Si) by hydrolyzing, and, after coating and drying of a condensed polymer obtained by the step (corresponding to an oligomer), formation of a layer with SiO_2 as primary component by heating.

Further, applying the coating method described in document 2 in order to form the undercoat layer or overcoat layer made of SiO_2 described in document 1 would be an obvious matter to a party skilled in the art.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of Box V.2 :

- Claims 4-5, 11-12, 20-21 and 25

The inventions described in each of the above claims appear to be novel and involve an inventive step over the documents cited in the ISR.

Regarding claims 4-5, 11-12 and 20-21:

The documents cited in the above ISR do not describe a treatment layer containing SiO_2 , TiO_2 and ZrO_2 ; nor is this obvious to a party skilled in the art.

Regarding claim 25:

The documents cited in the above ISR do not describe a process for forming a first treatment layer having a step for forming a layer with an inorganic oxide as primary component by heating a coating layer comprising a laminated lower coating layer and upper coating later, nor is this obvious to a party skilled in the art.